

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A door sensor comprising: characterized in that it is equipped with

at least one door position detector detecting means which is attached to at least one door body that can be opened and/or closed and which is capable of detecting at least one position occupied by the at least one door body during opening and/or closing thereof;

at least one object detector detecting means which is attached to the at least one door body and which detects a presence and/or an absence of at least one object in at least one detectable zone; and

at least one object determining circuit means which receives at least one output from the at least one door position detector detecting means and the at least one object detector detecting means, and which determines, in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof, whether at least one object detected by the at least one object detector detecting means is at least one object intended for detection,

wherein the at least one door position detector is attached to at least one door body capable of being opened and/or closed as a result of rotational motion, and includes at least one sensor which employs geomagnetism to detect at least one angular displacement position of the at least one door body.

2-3. (Canceled)

4. (Currently Amended) A door sensor according to claim 1, ~~the door sensor being characterized in that it is further comprising: equipped with~~  
at least one door controller that is attached to at least one surface facing toward at least one direction toward which the at least one door body moves when it is being opened and that stops, slows, and/or reverses the process of opening the door body in the event that at least one object detected by the at least one object detector detecting means is at least one object intended for detection.

5. (Currently Amended) A door sensor according to claim 1, ~~the door sensor being characterized in that it is further comprising: equipped with~~  
at least one door controller that is attached to at least one surface facing toward at least one direction toward which the at least one door body moves when it is being closed and that stops, slows, and/or reverses the process of closing the door body in the event that at least one object detected by the at least one object detector detecting means is at least one object intended for detection.

6. (Currently Amended) A door sensor according to claim 4, ~~the door sensor being characterized in that it is further comprising: equipped with~~  
at least one door controller that is attached to at least one surface facing toward at least one direction toward which the at least one door body moves when it is being closed and that stops, slows, and/or reverses the process of closing the door body in the event that at least one

object detected by the at least one object detector detecting means is at least one object intended for detection.

7. (Currently Amended) A door sensor according to claim 1, wherein the door sensor being characterized in that

the at least one door position detector detecting means, the at least one object detector detecting means, and the at least one object determining circuit means are housed within one sensor package.

8. (Currently Amended) A door sensor according to claim 4, wherein the door sensor being characterized in that

the at least one door position detector detecting means, the at least one object detector detecting means, and the at least one object determining circuit means are housed within one sensor package.

9. (Currently Amended) A door sensor according to claim 5, wherein the door sensor being characterized in that

the at least one door position detector detecting means, the at least one object detector detecting means, and the at least one object determining circuit means are housed within one sensor package.

10. (Currently Amended) A door sensor according to claim 1, ~~the door sensor being characterized in that it is further comprising: equipped with~~  
at least one fixed object detector detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects a presence and/or an absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

11. (Currently Amended) A door sensor according to claim 4, ~~the door sensor being characterized in that it is further comprising: equipped with~~  
at least one fixed object detector detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects a presence and/or an absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

12. (Currently Amended) A door sensor according to claim 5, ~~the door sensor being characterized in that it is further comprising: equipped with~~  
at least one fixed object detector detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects a presence and/or an absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

13. (Currently Amended) A door sensor according to claim 7, ~~the door sensor being characterized in that it is further comprising:~~ equipped with at least one fixed object detector detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects a presence and/or an absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

14. (Currently Amended) A door sensor according to claim 1, ~~wherein the door sensor being characterized in that~~ at least one position information output from one of the at least one door position detector detecting means is used in a shared fashion with a plurality of object detection outputs from a plurality of the at least one object detector detecting means.

15. (Currently Amended) A door sensor according to claim 4, ~~wherein the door sensor being characterized in that~~ at least one position information output from one of the at least one door position detector detecting means is used in a shared fashion with a plurality of object detection outputs from a plurality of the at least one object detector detecting means.

16. (Currently Amended) A door sensor according to claim 5, ~~wherein the door sensor being characterized in that~~

at least one position information output from one of the at least one door position detector  
~~detecting means~~ is used in a shared fashion with a plurality of object detection outputs from a  
plurality of the at least one object detector ~~detecting means~~.

17. (Currently Amended) A door sensor according to claim 10, wherein the door sensor  
~~being characterized in that~~

at least one position information output from one of the at least one door position detector  
~~detecting means~~ is used in a shared fashion with a plurality of object detection outputs from a  
plurality of the at least one object detector ~~detecting means~~.

18. (Currently Amended) A door sensor according to claim 1, wherein characterized in  
~~that~~

~~whereas~~ the at least one object detector ~~detecting means~~ is constituted so as to permit  
switching between or among detectable zones; and

the door sensor ~~is further comprises equipped with~~ at least one zone switching circuit  
~~means~~ which receives at least one output from the at least one door position detector ~~detecting~~  
~~means~~ and which switches between or among detectable zones of the at least one object detector  
~~detecting means~~ in correspondence to at least one position occupied by the at least one door body  
during opening and/or closing thereof.

19. (Currently Amended) A door sensor according to claim 4, wherein characterized in  
that

whereas the at least one object detector detecting means is constituted so as to permit  
switching between or among detectable zones; and

the door sensor is further comprises equipped with at least one zone switching circuit  
means which receives at least one output from the at least one door position detector detecting  
means and which switches between or among detectable zones of the at least one object detector  
detecting means in correspondence to at least one position occupied by the at least one door body  
during opening and/or closing thereof.

20. (Currently Amended) A door sensor according to claim 5, wherein characterized in  
that

whereas the at least one object detector detecting means is constituted so as to permit  
switching between or among detectable zones; and

the door sensor is further comprises equipped with at least one zone switching circuit  
means which receives at least one output from the at least one door position detector detecting  
means and which switches between or among detectable zones of the at least one object detector  
detecting means in correspondence to at least one position occupied by the at least one door body  
during opening and/or closing thereof.

21. (Currently Amended) A door sensor according to claim 7, wherein characterized in  
that

whereas the at least one object detector detecting means is constituted so as to permit  
switching between or among detectable zones; and

the door sensor is further comprises equipped with at least one zone switching circuit  
means which receives at least one output from the at least one door position detector detecting  
means and which switches between or among detectable zones of the at least one object detector  
detecting means in correspondence to at least one position occupied by the at least one door body  
during opening and/or closing thereof.

22. (Currently Amended) A door sensor according to claim 10, wherein characterized in  
that

whereas the at least one object detector detecting means is constituted so as to permit  
switching between or among detectable zones; and

the door sensor is further comprises equipped with at least one zone switching circuit  
means which receives at least one output from the at least one door position detector detecting  
means and which switches between or among detectable zones of the at least one object detector  
detecting means in correspondence to at least one position occupied by the at least one door body  
during opening and/or closing thereof.

23. (Currently Amended) A door sensor according to claim 14, wherein characterized in  
that

whereas the at least one object detector detecting means is constituted so as to permit  
switching between or among detectable zones; and

the door sensor is further comprises ~~equipped with~~ at least one zone switching circuit  
means which receives at least one output from the at least one door position detector detecting  
means and which switches between or among detectable zones of the at least one object detector  
detecting means in correspondence to at least one position occupied by the at least one door body  
during opening and/or closing thereof.

24. (Currently Amended) A door characterized in that the at least one door sensor  
according to claim 1 is attached to at least one door body, the door body engaging in opening  
and/or closing operations in a linked fashion with object detecting operations of the at least one  
door sensor.